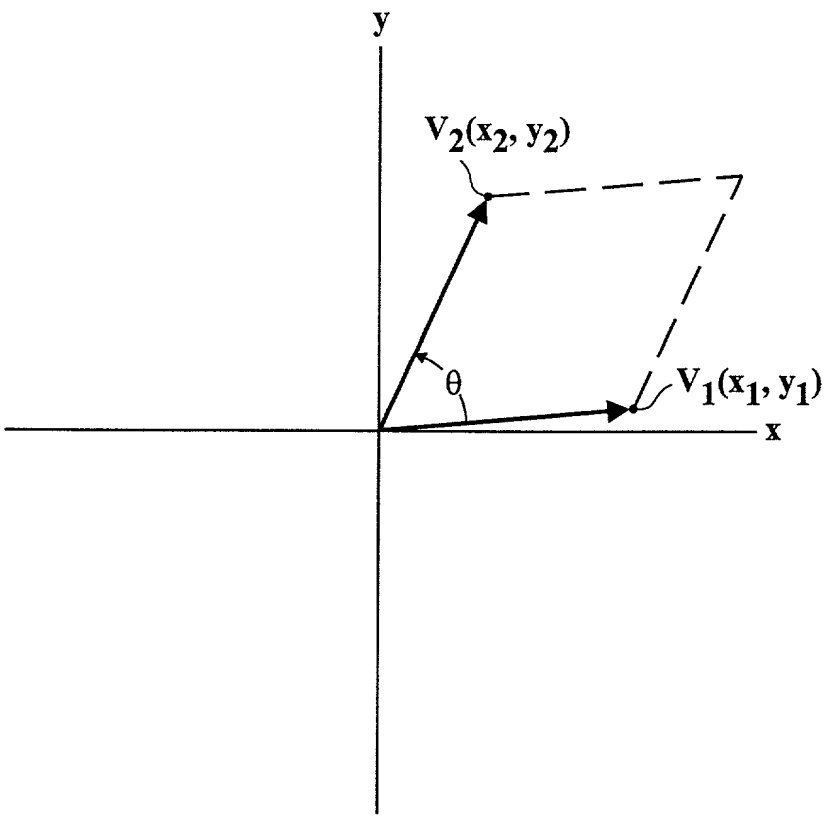


FIG. 1

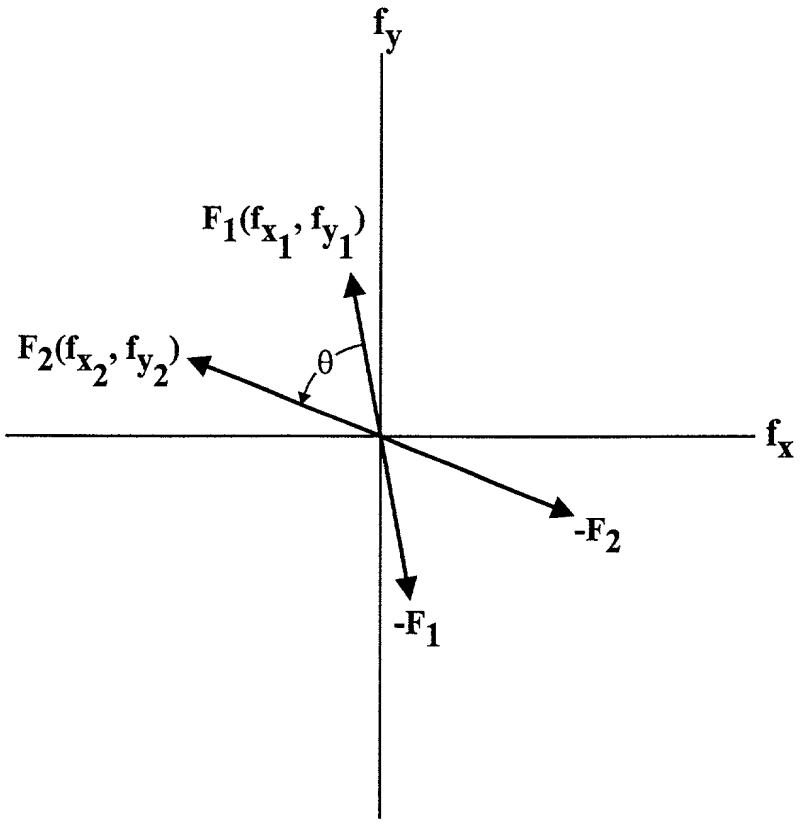
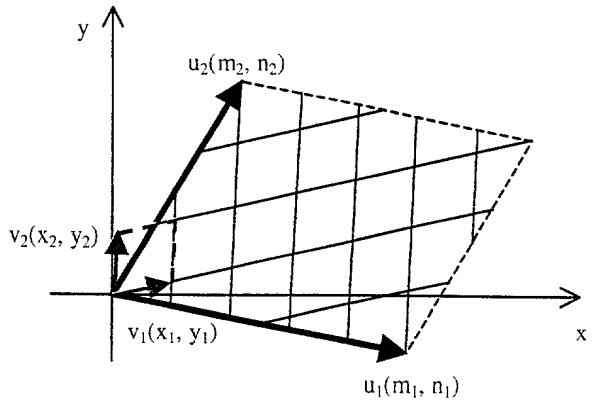


FIG. 2

Fig. 3


y
$u_2(m_2, n_2)$
$v_2(x_2, y_2)$
$v_1(x_1, y_1)$
x
$u_1(m_1, n_1)$

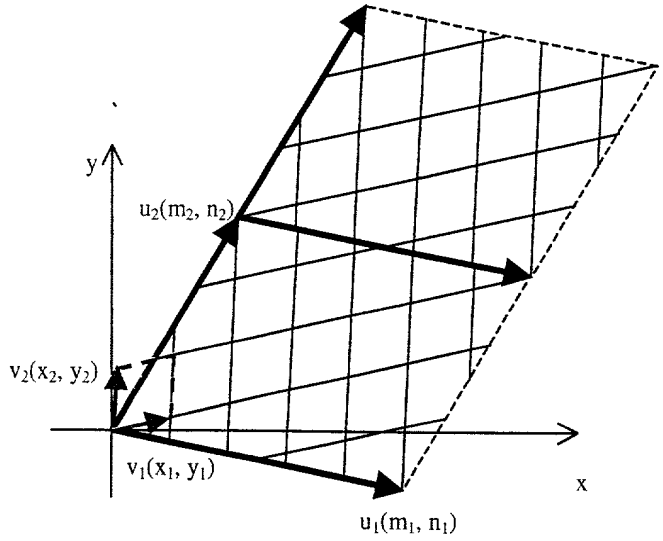

y
$u_2(m_2, n_2)$
$v_2(x_2, y_2)$
$v_1(x_1, y_1)$
x
$u_1(m_1, n_1)$

Fig. 4

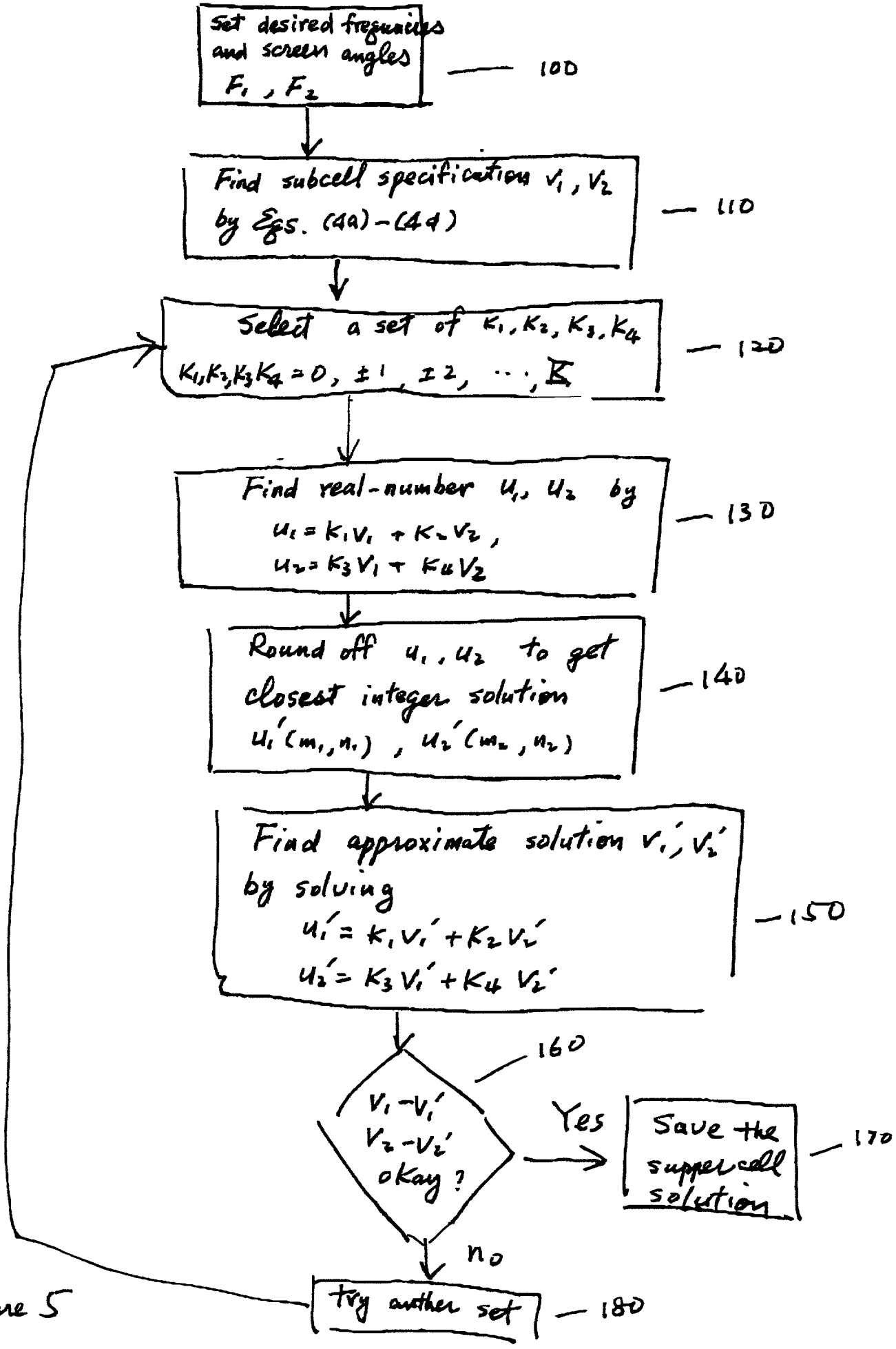

Set desired frequencies and screen angles F_1, F_2
100
Find subcell specifications V_1, V_2 by Eqs. (4a)-(4d)
110
Select a set of K_1, K_2, K_3, K_4
$K_1, K_2, K_3 K_4 = 0, \pm 1, \pm 2, \cdots, \pm K$
120
Find real-number u_1, u_2 by
$u_1 = K_1 V_1 + K_2 V_2$,
$u_2 = K_3 V_1 + K_4 V_2$
130
Round off u_1, u_2 to get closest integer solution
$u_1'(m_1, n_1)$, $u_2'(m_2, n_2)$
140
Find approximate solution V_1', V_2' by solving
$u_1' = K_1 V_1' + K_2 V_2'$
$u_2' = K_3 V_1' + K_4 V_2'$
150
160
$V_1 - V_1'$
$V_2 - V_2'$
okay ?
Yes
Save the supercell solution
170
no
try another set
180

Figure 5

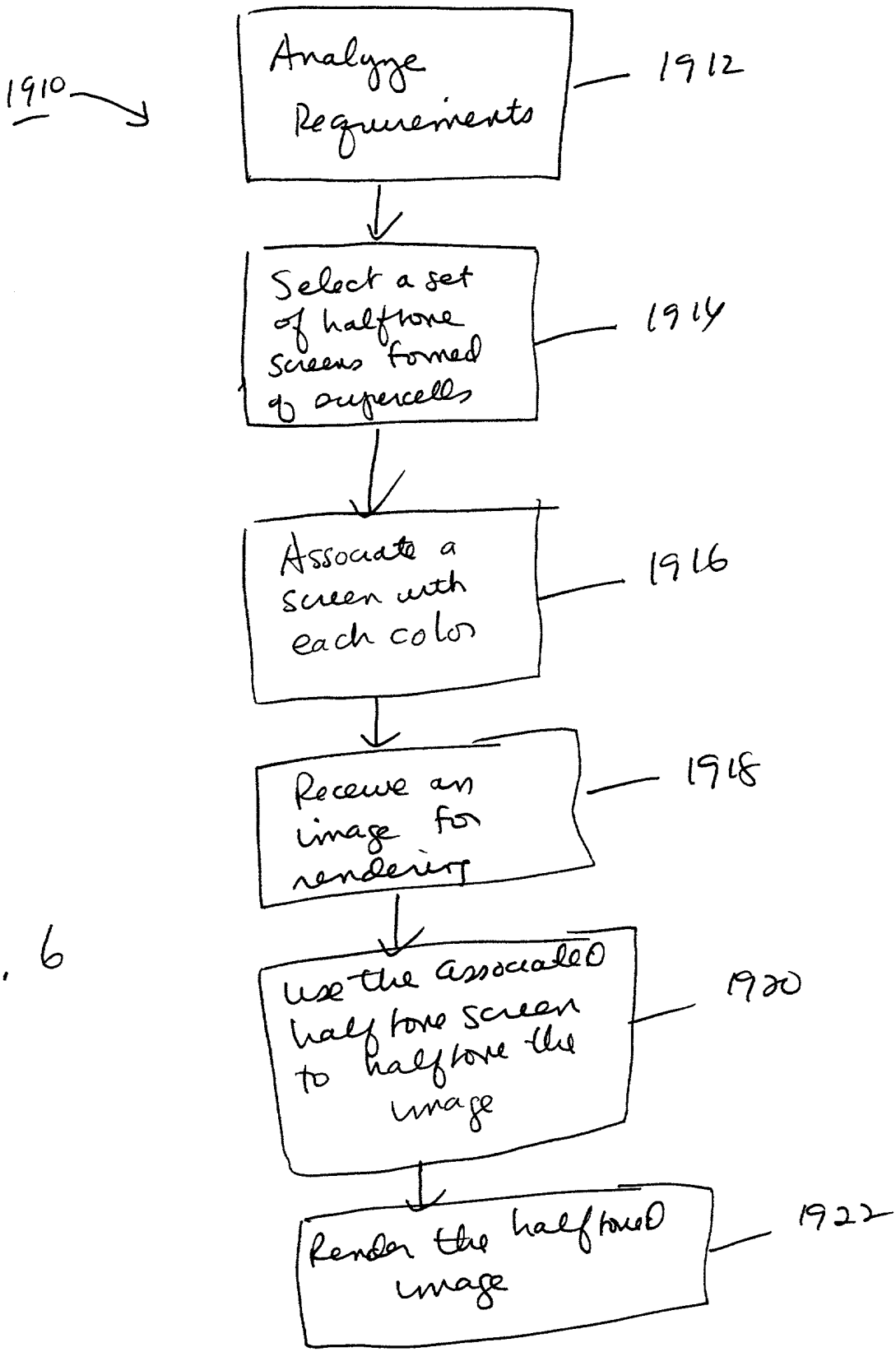

1910
Analyze Requirements
1912
Select a set of halftone screens formed of supercells
1914
Associate a screen with each color
1916
Receive an image for rendering
1918
Use the associated halftone screen to halftone the image
1920
Render the halftoned image
1922

Fig. 6

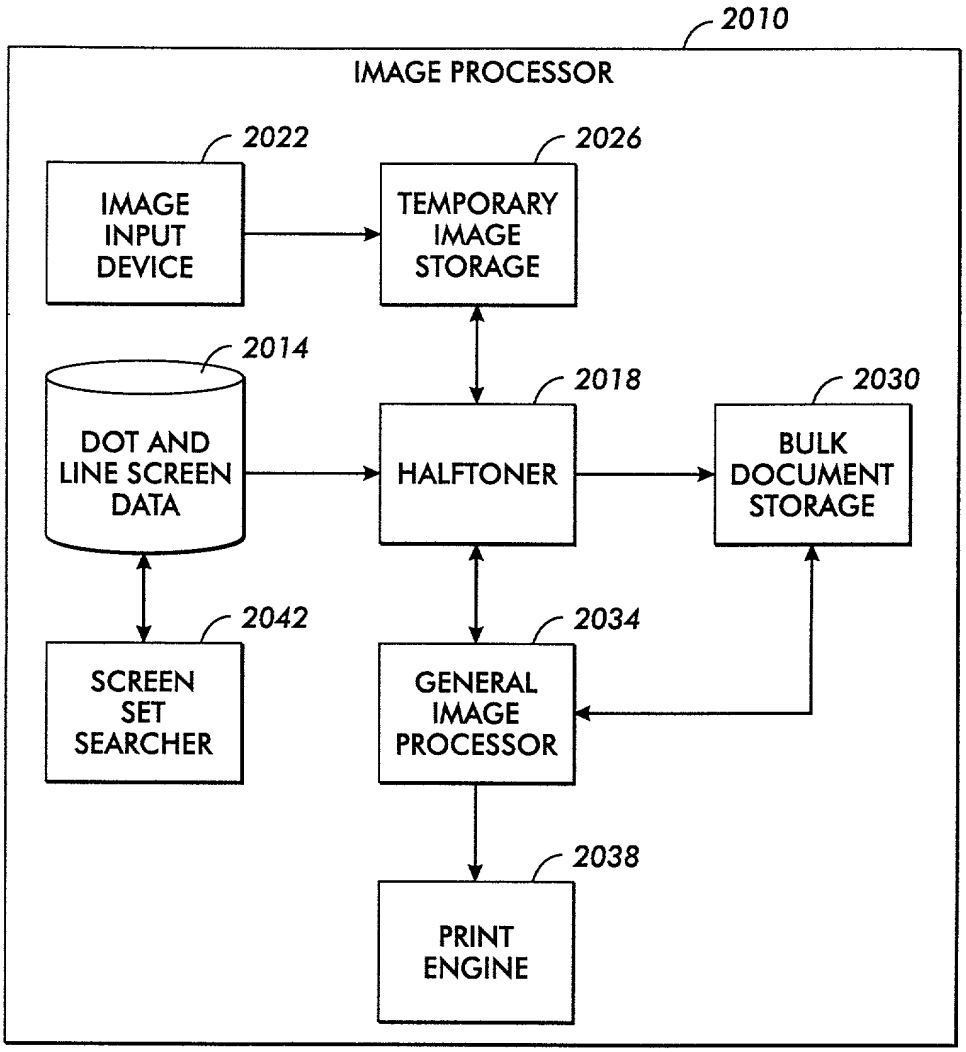

2010
IMAGE PROCESSOR
2022
IMAGE INPUT DEVICE
2026
TEMPORARY IMAGE STORAGE
2014
DOT AND LINE SCREEN DATA
2018
HALFTONER
2030
BULK DOCUMENT STORAGE
2042
SCREEN SET SEARCHER
2034
GENERAL IMAGE PROCESSOR
2038
PRINT ENGINE

Fig. 7